

ABSTRACT OF THE DISCLOSURE

A method of forming a polysilicon thin film transistor that includes depositing an amorphous silicon layer over a substrate, crystallizing the amorphous silicon layer into a polycrystalline silicon layer, patterning the polycrystalline silicon layer to form a polysilicon active layer for a thin film transistor, depositing silicon oxide over the polysilicon active layer to form a gate insulation layer under a vacuum condition, applying heat to anneal the gate insulation layer under a vacuum condition and forming a gate electrode on the annealed gate insulation layer.